Y2K SOLUTION APPROACHES

There are multiple solutions to the problem. Each has some merit, such as quick implementation time, and some drawbacks, such as limited ranges of applicability. For a relative comparison of these techniques and how long they take to implement, see figure 1[1].

- *Data-date expansion:* Convert all two-digit dates to four digits in the data files.
- *Software-date expansion:* Handle the date expansion requirements in the software doing the calculation.
- *Compliant commercial software:* Purchase Y2K compliant software that meets your needs.
- *Binary date encoding:* Modify the software to represent dates at the bit level. Two bytes, or 16 bits, can account for over 65,000 years.
- *Database duplication:* Develop two- and four-digit versions of databases to work with compliant and non-compliant software.
- *Redevelop software:* Redo the application software so that it becomes compliant.
- *Year interception:* Catch all date calculations and replace erroneous results with correct ones.
- *Windowing:* Choose an appropriate year, for example 1950, and process all years between 50 and 99 as 20th century dates, all years between 00 and 49 as 21st century dates.
- *Year shifting:* Use the 28-year cycle of the calendar and shift dates until all dates that need to be processed are in the same century.
- *Manual:* Reinstitute non-automated processes.

[1] "Year 2000 Survival Guide," Edmund X. DeJesus, BYTE Magazine, July 1998, p. 53.

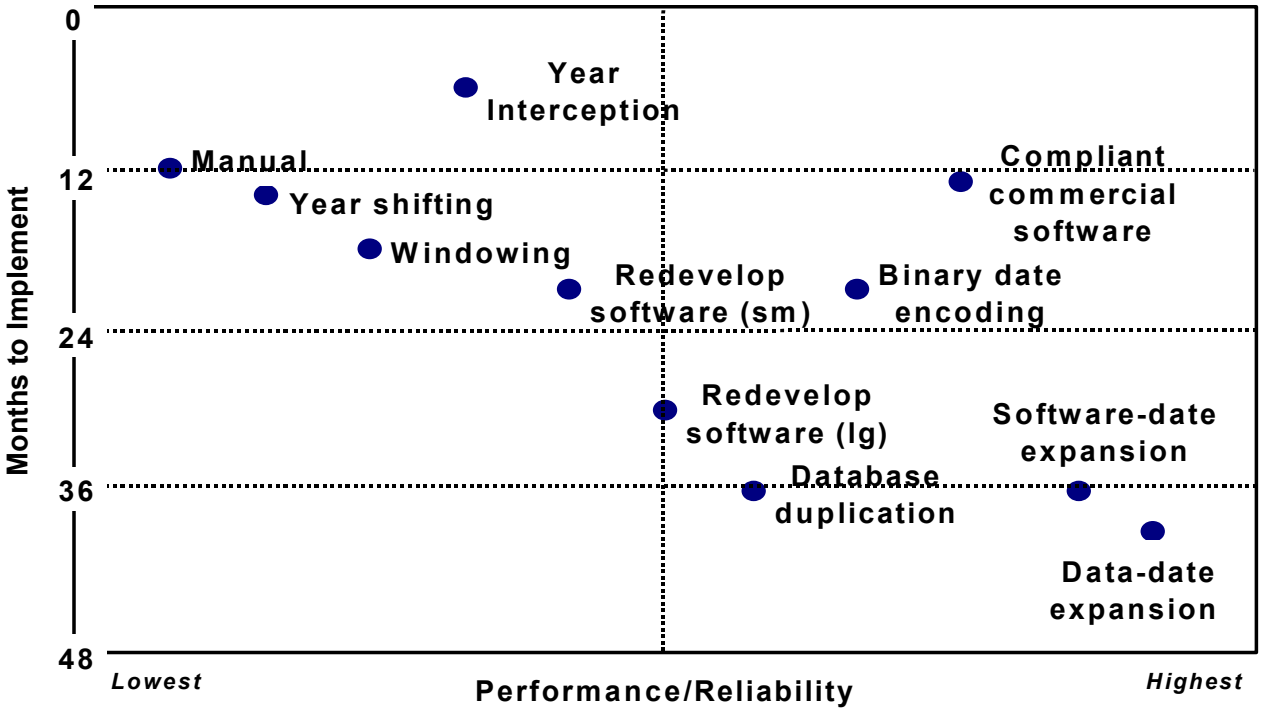

Figure 1. Relative Comparison of Y2K Solutions

INVESTIGATING THE IMPACT OF THE YEAR 2000 PROBLEM